

ABSTRACT OF THE DISCLOSURE

In an acoustic model producing apparatus, a plurality of noise samples are categorized into clusters so that a number of the clusters is smaller than that of noise samples. A noise sample is selected in each of the clusters to set the selected noise samples to second noise samples for training. On the other hand, untrained acoustic models are stored on a storage unit so that the untrained acoustic models are trained by using the second noise samples for training, thereby producing trained acoustic models for speech recognition so as to produce a trained acoustic model for speech recognition.